

Notice of Allowability

Application No.

10/069,329

Examiner

Carlos Lopez

Applicant(s)

FEENSTRA, FRITS KORNELIS

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/20/05 and 4/12/05.
2. ☒ The allowed claim(s) is/are 1-4, 7-19 and 21-23.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 4/12/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/20/05 has been entered.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tim Meade on 4/12/05.

The application has been amended as follows:

Claim 1 (Currently Amended): A method for fabricating a functional dental element using a three-dimensional printing technique **comprising**:

applying successive layers of powder ~~wherein layers of a suitable material are successively applied onto each other~~ **to form the dental element; [[.]]**

~~wherein the suitable material is a powder and wherein the bonding the layers by means of a binder wherein each layer is bonded at desired positions to a preceding layer thereby allowing [[the]] removal of excess non-adhering material ; [[.]]~~

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~~wherein the element obtained is subjected to a sintering~~ the dental element to form necks between the powder particles; ~~[[.]]~~

and **subjecting** the sintered **dental** element ~~is subjected~~ to infiltration by second phase.

Claim 12 (Currently Amended):

A method according to claim 11, wherein in a layer, the powder comprises powders of ~~[[a]] different nature~~ **materials**.

Claim 13 (Currently Amended)

A method according to claim 12, wherein in a layer, the powder comprises powders of ~~[[a]] different color~~ **colors**.

Claim 14 (Currently Amended)

A method according to claim 11, wherein at least one layer differs in composition from the others **other layers**.

Claim 20 has been cancelled.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: the cited prior art fails to disclose or reasonably suggest a method of making a dental element comprising the steps of applying successive layers of powder to form the dental

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element, bonding the layers at desired positions to a [§]presiding layer in combination with sintering the dental element to form necks between the powder particles.

Brodking discloses applying successive layers of powder and simultaneously sintering the particles to form the dental element (col. 4, lines 20-22). The dental element is then cured/heated (col. 4, lines 40ff). Hence Brodking is silent of sintering the formed dental element to form necks between the powder particles. It is noted that Brodkin heats the dental element but fails to disclose or reasonably suggest that the temperature and heating time sufficient to form necks between the particles.

Neck growth between particles is dependent on particle size, temperature and heating time (See Published Patent Application US 20040024470, paragraph 21); parameters not disclosed by Brodkin to reasonably suggest that neck growth occurs during the curing/heated of Brodkin's dental element.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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